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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,297

09/10/2003

Gary A. Gibson

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12/14/2004

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EXAMINER

BHAT, ADITYA S

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/660,297	GIBSON ET AL.	
	Examiner	Art Unit	
	Aditya S Bhat	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-9,13-19,21 and 23-34 is/are rejected.
- 7) ☒ Claim(s) 3,6,10-12,20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/10/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1,2,4,5,7-9,13-19,21 and 23-34 are rejected under 35 U.S.C. 102(a) as being anticipated by Azuma et al. (USPN 6,477,132).

With regards to claim 1, Azuma et al. (USPN 6,477,132) teaches a data storage device comprising:

a probe tip mounted on a suspension mechanism; (See abstract)

a data storage layer; (Col. 5, lines 8-10)

at least one conducting layer wherein a capacitance is formed between the suspension mechanism and the at least one conducting layer; (see figure 1) (Col.6, lines 38-54) and a sensor for sensing a change in the capacitance based on a displacement of the probe tip due to the presence of a bit. (Col. 5, lines 60-61)

With regards to claim 2, Azuma et al. (USPN 6,477,132) teaches the data storage layer is in contact with the probe tip. (Col. 7, lines 40-45)

With regards to claim 4, Azuma et al. (USPN 6,477,132) teaches the data storage layer comprises a polymer material. (Col.9, lines 19-20)

With regards to claim 5, Azuma et al. (USPN 6,477,132) teaches the conducting layer comprises a conducting thin film. (Col. 2,lines 33-34)

With regards to claim 7, Azuma et al. (USPN 6,477,132) teaches the conducting layer comprises a conducting substrate. (208;See figure 1)

With regards to claim 8, Azuma et al. (USPN 6,477,132) teaches the conducting substrate comprises a doped silicon material. (Col.6, lines 31-33)

With regards to claim 9, Azuma et al. (USPN 6,477,132) teaches the suspension mechanism includes a flexible cantilever. (see abstract)

With regards to claim 13, Azuma et al. (USPN 6,477,132) teaches a method of reading data from a data storage device comprising:

suspending a probe tip over a data storage layer via a suspension mechanism;
(See abstract)

providing at least one conducting layer wherein a capacitance is formed between the suspension mechanism and the at least one conducting layer; (see figure 1) (Col.6, lines 38-54) and

sensing a change in the capacitance based on a displacement of the probe tip due to the presence of a bit. (Col. 5, lines 60-61)

With regards to claim 19, Azuma et al. (USPN 6,477,132) teaches a the suspension mechanism further includes a flexible cantilever and the act of providing at least one conducting layer further comprises providing a conducting layer within the suspension mechanism whereby a capacitance is formed between the conducting layer and the flexible cantilever. (See abstract)

With regards to claim 21, Azuma et al. (USPN 6,477,132) teaches a the act of sensing a change in capacitance comprises sensing a difference in capacitance between the first and second capacitance. (Col. 5, lines 60-61)

With regards to claim 23, Azuma et al. (USPN 6,477,132) teaches a computer system comprising:

a central processing unit; and a data storage device coupled to the central processing unit comprising: (Col.18, lines 30-34)

a probe tip mounted on a suspension mechanism; (See abstract)

a data storage layer; (Col. 5, lines 8-10)

at least one conducting layer wherein a capacitance is formed between the suspension mechanism and the at test one conducting layer; (see figure 1) (Col.6, lines 38-54) and a sensor for sensing a change in the capacitance based on a displacement of the probe tip due to the presence of a bit. (Col. 5, lines 60-61)

With regards to claim 24, Azuma et al. (USPN 6,477,132) teaches a data storage device comprising:

a probe tip mounted on a flexible suspension mechanism; (See abstract)

at least one capacitor coupled to the flexible suspension; and

a sensor for sensing a change in capacitance of the at least one capacitor based on a displacement of the probe tip due to the presence of a bit. (Col. 5, lines 60-61)

Allowable Subject Matter

Claims 3,6,10-12,20 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Takashashi et al. (USPN 6,665,239) teaches an optical information recording and reproducing apparatus, Shido et al. (USPN 6072,764) teaches a information processing apparatus having face regulating system and Kuroda et al. (USPN 5,546,374) teaches a information recording and/or reproducing apparatus using a probe.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aditya S Bhat whose telephone number is 571-272-2270. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aditya Bhat
December 10, 2004



JOHN E. NOW
Supervisory Patent Examiner
Technology Center 2800